Weekly Report

梅鸿辉

May 27, 2018

1. 大黑书修订

高性能计算

添加了一些内容

生命科学

添加了一些新工作，包括高分辨率光学显微镜相关

添加混合绘制相关

网络安全

完善智能电网相关

添加工作样例

金融数据

完善内容

2. VisEvo

考虑了一下投CHI的主要思路，具体内容有待完善。下周做一下idea evaluation。

3. 专利

周舒悦的那篇已经写完，正在和律师联系，由于下周需要完成毕业论文以及去北京一趟，可能进度会拖慢一些。魏雅婷的一篇因为之前生病还需要一些时间。

Papaer Reading

3.1 大黑书修订 - BI

[1] M. Obeidat, M. North, S. North, R. Richardson, and V. Rattanak, “Business Intelligence Technology, Applications, and Trends.,” Int. Manag. Rev., vol. 11, no. 2, pp. 47–56, 2015.

[2] T. de Jager and I. Brown, “A Descriptive Categorized Typology of Requisite Skills for Business Intelligence Professionals,” Proc. Annu. Conf. South African Inst. Comput. Sci. Inf. Technol. - SAICSIT ’ 16, pp. 1–10, 2016.

[3] M. D. Peters, B. Wieder, S. G. Sutton, and J. Wakefield, “Business intelligence systems use in performance measurement capabilities: Implications for enhanced competitive advantage,” Int. J. Account. Inf. Syst., vol. 21, pp. 1–17, 2016.

[4] H. Al-Aqrabi, L. Liu, R. Hill, and N. Antonopoulos, “Cloud BI: Future of business intelligence in the Cloud,” J. Comput. Syst. Sci., vol. 81, no. 1, pp. 85–96, 2015.

3.2 大黑书修订 - 生命科学

[1] B. C. Chen et al., “Lattice light-sheet microscopy: Imaging molecules to embryos at high spatiotemporal resolution,” Science (80-.)., vol. 346, no. 6208, 2014.

[2] T. Liu et al., “Observing the cell in its native state: Imaging subcellular dynamics in multicellular organisms,” Science (80-.)., vol. 1392, no. April, 2018.

[3] N. Ji, “Adaptive optical fluorescence microscopy,” Nat. Methods, vol. 14, no. 4, pp. 374–380, 2017.

[4] K. Lawonn, N. N. Smit, K. Bühler, and B. Preim, “A Survey on Multimodal Medical Data Visualization,” vol. 0, no. 1, pp. 1–25, 2017.

[5] T. Schultz and A. Vilanova, “Diffusion MRI visualization,” NMR Biomed., no. November 2017, pp. 1–15, 2018.

[6] S. Lindholm, M. Falk, E. Sundén, A. Bock, A. Ynnerman, and T. Ropinski, “Hybrid data visualization based on depth complexity histogram analysis,” Comput. Graph. Forum, vol. 34, no. 1, pp. 74–85, 2015.

[7] D. J. Kim, B. Kim, J. Lee, J. Shin, K. W. Kim, and Y. G. Shin, “High-quality slab-based intermixing method for fusion rendering of multiple medical objects,” Comput. Methods Programs Biomed., vol. 123, pp. 27–42, 2016.

[8] G. Ristovski, T. Preusser, H. K. Hahn, and L. Linsen, “Uncertainty in medical visualization: Towards a taxonomy,” Comput. Graph., vol. 39, no. 1, pp. 60–73, 2014.

[9] K. Lawonn, S. Gla??er, A. Vilanova, B. Preim, and T. Isenberg, “Occlusion-free Blood Flow Animation with Wall Thickness Visualization,” IEEE Trans. Vis. Comput. Graph., vol. 22, no. 1, pp. 728–737, 2016.

3.3 大黑书修订 - 金融

[1] P. Sarlin, “Data and dimension reduction for visual financial performance analysis,” Inf. Vis., vol. 14, no. 2, pp. 148–167, 2015.

[2] P. Sarlin, “Sovereign debt monitor: A visual self-organizing maps approach,” IEEE SSCI 2011 - Symp. Ser. Comput. Intell. - CIFEr 2011 2011 IEEE Symp. Comput. Intell. Financ. Eng. Econ., pp. 67–74, 2011.

3.4 大黑书修订 - 科学计算

[1] J. Zhang, H. Guo, F. Hong, X. Yuan, and T. Peterka, “Dynamic Load Balancing Based on Constrained K-D Tree Decomposition for Parallel Particle Tracing,” IEEE Trans. Vis. Comput. Graph., vol. 24, no. 1, pp. 954–963, 2018.

[2] H. Guo, N. Ave, N. Ave, and T. Peterka, “Extreme-Scale Stochastic Particle Tracing for Uncertain Unsteady Flow Analysis,” 2015.

[3] C. Wang and J. Tao, “Graphs in Scientific Visualization: A Survey,” Comput. Graph. Forum, vol. 36, no. 1, pp. 263–287, 2017.

[4] J. Zhang and X. Yuan, “A survey of parallel particle tracing algorithms in flow visualization,” J. Vis., pp. 1–18, 2018.

3.5 大黑书修订 - 智能电网

[1] R. Klump, R. E. Wilson, and K. E. Martin, “Visualizing Real-Time Security Threats Using Hybrid SCADA / PMU Measurement Displays,” Proc. 38th Annu. Hawaii Int. Conf. Syst. Sci., vol. 00, no. C, p. 55c–55c, 2005.

[2] M. Angelini, D. de Santis, and G. Santucci, “Toward Geographical Visualizations for Hierarchical Security Data,” Vis. Cyber Secur., 2014.

[3] W. J. W. Matuszak, L. DiPippo, and Y. Y. L. Sun, “CyberSAVe: Situational Awareness Visualization for Cyber Security of Smart Grid Systems,” Proc. Tenth Work. Vis. Cyber Secur., pp. 25–32, 2013.

[4] M. Steiger, T. May, J. Davey, and J. Kohlhammer, “Smart Grid monitoring through visual analysis,” 2013 4th IEEE/PES Innov. Smart Grid Technol. Eur. ISGT Eur. 2013, pp. 2–6, 2013.

[5] J. Yan, Y. Yang, W. Wang, H. He, and Y. Sun, “An integrated visualization approach for smart grid attacks,” ICICIP 2012 - 2012 3rd Int. Conf. Intell. Control Inf. Process., pp. 277–283, 2012.

TASK	DESCRIPTION	SCHEDULE
大黑书修订	阅读相关文献/添加近期新研究成果	下周完成初稿
VisEvo	考虑投SigCHI；idea evaluation	下周
专利（两篇）	初稿完成(1/2)	下周与律师沟通
RSATree代码重构	后端C++化	6月完成

计划-中期

TASK	DESCRIPTION	SCHEDULE
RSATree后续 - Visual Query	RSATree中关于Visual Query（界面）部分的继续工作，包括查询流程、交互等，考虑投SigCHI	本周完成构思
分辨率自适应可视化	思考可行的方向，考虑是否投SigCHI	本周敲定目标

计划-长期

TASK	DESCRIPTION	SCHEDULE
毕业论文	目前定位为可是设计方向	开始考虑一下整体构思

Works Progresses

TASK	PROGRESS	TODO	ISSUES	DATE
RSATree	等待VIS结果	整理代码		
RSATree专利		与律师沟通		下周
大黑书修订				
VisEvo		idea evaluation		
电子学报	已进入最后阶段			
ECharts论文	完成proof	等待最终发布		
分辨率自适应可视化		学习/咨询相关理论基础		